

CLAIMS

We Claim:

- 5 1. A method for upgrading an imaging system comprising the steps of:
removing an original camera attachment means from an imaging
instrument comprising an optical path wherein the optical path comprises
a first subject matter starting point and an original image plane ending
point;
10 attaching a quick-release receptacle to the imaging instrument;
affixing a replacement camera comprising a replacement image plane and
a lens mount to a camera adapter coupling wherein the camera adapter
coupling comprises a quick-release coupling end and a lens emulating
flange opposing the quick-release coupling end and wherein the camera is
15 affixed to the camera adapter coupling by mating the lens emulating
flange with the lens mount; and
mating the quick release coupling end of the camera adapter coupling to
the quick-release receptacle.
- 20 2. The method of Claim 1 wherein the camera is a digital camera.
3. The method of Claim 1 further comprising the steps of:
inserting a compensating lens into the optical path of the imaging instrument if
a compensating lens is required to focus an image onto the replacement
25 image plane or if enlargement of a subject matter image striking the
replacement image plane is desired.
4. The method of Claim 1 wherein the length of the camera adapter coupling is
adjusted to displace the replacement image plane relative to the original
30 image plane in order to enlarge a subject matter image striking the

replacement image plane relative to that same image striking the original image plane.

5 5. The method of Claim 1 wherein the imaging instrument comprises an eyepiece, further comprising the step of displacing the eyepiece in order to preclude physical interference of the eyepiece with the cameral.

10 6. The method of Claim 1 wherein the imaging instrument comprises an eyepiece, further comprising the step of displacing the eyepiece in order to compensate for variation in the optical path resulting from displacement of the replacement image plane relative to the original image plane.

15 7. The method of Claim 1 wherein the quick-release receptacle comprises an offset-eliminating flange and a capture cowling.

8. The method of Claim 1 wherein the quick-release receptacle comprises an non-offset-eliminating flange and a capture cowling.

20 9. An upgrade kit for imaging systems comprising:
quick-release receptacle that mounts on an optical assemblage and accepts a quick-release coupling wherein the optical assemblage focuses an image onto an original image plane; and
camera adapter coupling comprising a first end being a quick-release coupling and a second end being a lens-emulating flange and wherein the
25 quick-release coupling mates with the quick-release receptacle.

10. The upgrade kit of Claim 9 further comprising a camera.

30 11. The upgrade kit of Claim 10 wherein the camera is a digital camera.

12. The upgrade kit of Claim 9 further comprising a compensating lens that adjust the focal length of the optical assemblage so as to focus an image on to a replacement image plane comprising a camera that may be mounted on the lens-emulating flange.

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13. The upgrade kit of Claim 9 further comprising a compensating lens that enlarges images focused by the optical assemblage on to a replacement image plane comprising a camera that may be mounted on the lens-emulating flange.

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14. The upgrade kit of Claim 9 wherein the length of the camera adapter coupling is adjusted to displace a replacement image plane comprising a camera that may be mounted onto the lens-emulating flange relative to the original image plane in order to enlarge an image focused by the optical assemblage onto the original image plane.

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15. The upgrade kit of Claim 9 wherein the optical assemblage comprises an eyepiece mount for accepting an eyepiece and further comprising an eyepiece tower that displaces the mounting position of an eyepiece so as to preclude physical interference of the eyepiece with a camera that may be mounted onto the lens-emulating flange.

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16. The upgrade kit of Claim 9 wherein the optical assemblage comprises an eyepiece mount for accepting an eyepiece and further comprising an eyepiece tower that displaces the mounting position of an eyepiece in order to compensate for displacement of the a digital image plane comprising a camera that may be mounted onto the lens-emulating flange relative to the original image plane.

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